

**Appl. No.** : **10/827,074**  
**Filed** : **April 19, 2004**

### **REMARKS**

The specification has been amended to correct a clerical error in view of the context, and also support can be found in Table 1, for example.

Claim 1 has been amended to include the limitation of claim 3. Claim 3 has been cancelled. Claim 20 has been added. Support for claim 20 can be found on page 22, lines 15-17, for example.

No new matter has been added. Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and the following remarks.

#### **Claim Rejections - 35 U.S.C. § 102**

Claims 1, 2, and 7-19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Fleischer et al. (US6,225,009). Claim 1 has been amended to include the limitation of claim 3 which has not been rejected on this ground. Claims 2 and 7-19 are dependent upon claim 1. Thus, this rejection is now moot.

#### **Claim Rejections - 35 U.S.C. § 103**

Claims 3-5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fleischer et al.(US6,225,009) in view of Yoshioka et al.(US4693828).

The Office action states that Fleischer and Yoshioka are analogous art because they are both concerned with a similar problem solving area of using anion-exchange materials to accomplish ion exchange.

Yoshioka is directed to an ion-exchanger fiber which is used for producing pure water (column 1, lines 6-8). More specifically, it is used for softening water, desalting water, removing toxic metals, isolating and recovering useful heavy metals and rare earth metals. Other than producing pure water, Yoshioka discloses usage of the an ion-exchanger fiber for removing chromic acid, decoloration and desalting of sugar solutions, purification and separation of pharmaceuticals and antibiotics, purification and separation of amino acids, separation of optical isomers and isomerized sugars, adsorption of various organic acids and organic bases, adsorption of surface active agents, purification of iodine and formalin, adsorption of pigments, removal of

**Appl. No.** : **10/827,074**  
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moisture, and adsorption/removal of proteins, peptides, enzymesn nucleic acids, hormones, nucleotides, alkaloids, lipids, steroids, viruses, cells, and acidic/basic gases (column 3, lines 17-48).

However, **none** of the above is a function of an electrode. Although the Office action states that Fleischer and Yoshioka are analogous art because they are both concerned with a similar problem solving area of using anion-exchange materials to accomplish ion exchange, it was **not** commonly known that electrodes and ion-exchangers involve similar problems. It was **not** known that anions accumulate on a surface of an electrode containing a proton-conducting compound as the electrode is charged/discharged.

Further, by using the anion-exchange fiber, cycle-life properties and high-speed charge/discharge properties are significantly improved when used in an electrochemical cell (see e.g., the Examples such as Examples 1 and 7 as compared with Example 10 in the instant specification). This is because anions in an electrolyte are trapped so as to prevent increase in a resistance of the electrode surface and also to prevent reduction in ion conductivity of the electrolyte (page 14, lines 14-18 and page 15, lines 10-17). The above results and effects **cannot be predictable** from Fleisher and Yoshioka, alone or combined.

In view of the foregoing, claim 1 cannot be *prima facie* obvious over Fleischer and Yoshioka. Claims 4-5 are dependent upon claim 1, and thus at least for this reason, there claims also cannot be *prima facie* obvious over the references. Applicant respectfully requests withdrawal of this rejection.

#### Rejections of Claim 6 Under 35 U.S.C. § 103

Claim 6 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fleischer. Claim 6 is dependent upon claim 1 including the limitation of claim 3 which has not been rejected on this ground. Thus, this rejection is now moot.

#### New Claim

Claim 20 has been added. Claim 20 recites: the electrochemical according to Claim 10, wherein the electrolyte is **an aqueous solution** containing a proton-ionizing electrolyte. Fleischer is directed to an electrochemical cell having a **non-liquid** electrolyte (column 4, lines 52-60). Yoshioka is irrelevant to the limitation of claim 10. Thus, the references cannot lead to claim 20.

**Appl. No.** : **10/827,074**  
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**CONCLUSION**

In light of the Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 14, 2007

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